



# 4% of online Americans use location-based services

Kathryn Zickuhr, Web Coordinator  
Aaron Smith, Senior Research Specialist

11/4/2010

<http://pewinternet.org/Reports/2010/Location-based-services.aspx>

---

Pew Research Center's Internet & American Life Project  
1615 L St., NW – Suite 700  
Washington, D.C. 20036  
202-419-4500 | [pewinternet.org](http://pewinternet.org)

## Overview: Location-based service users are more often young and mobile

In its first report on the use of “geosocial” or location-based services, the Pew Research Center’s Internet & American Life project finds that 4% of online adults use a service such as Foursquare or Gowalla that allows them to share their location with friends and to find others who are nearby. On any given day, 1% of internet users are using these services.

This is the second survey of the Pew Internet Project to ask about such “geosocial” or location-based services. The current number shows little change from the first time this question was asked, in a May 2010 survey, when 5% of adult internet users said they had used such a site.

### Key findings:

- 7% of adults who go online with their mobile phone use a location-based service.
- 8% of online adults ages 18-29 use location-based services, significantly more than online adults in any other age group.
- 10% of online Hispanics use these services – significantly more than online whites (3%) or online blacks (5%).
- 6% of online men use a location-based service such as Foursquare or Gowalla, compared with 3% of online women.

## Background

Location-based services such as Foursquare and Gowalla use internet-connected mobile devices’ geolocation capabilities to let users notify others of their locations by “checking in” to that location. Location-based services often run on stand-alone software applications, or “apps,” on most major GPS-enabled smartphones or other devices.<sup>1</sup>

Some of these “geosocial” services emphasize social networking functions, and can notify friends on the service when the user is nearby. Users may also be able to leave comments or reviews for a certain business or other location, which may be viewed by later visitors. Other services take a gaming approach, in which check-ins are used to unlock “levels” or “badges,” or can be used to earn a certain title (such as “Mayor”) when the user has checked in to that location more than any other user. (Here the mobile device’s GPS function is also important to help prevent people from checking in to places they are not at physically, which is considered a form of cheating.) Such detailed real-time information about customers’ habits is very attractive to businesses, who may share special deals with users, or reward “mayors” and other frequent users with free or discounted services.

---

<sup>1</sup> For more on apps use, see “The Rise of Apps Culture” (2010), <http://pewinternet.org/Reports/2010/The-Rise-of-Apps-Culture.aspx>

## The use of “geosocial” or location-based services

Four percent of online adults use a service such as Foursquare or Gowalla that allows them to share their location with friends and to find others who are nearby. On any given day, 1% of internet users are using these services. The following table gives a breakdown of the demographic differences among internet users who use geosocial or location-based services:

---

### Demographics of location-based service users

*% of internet users who use a location-sharing service such as Foursquare or Gowalla*

<b>All internet users</b>	<b>4%</b>
Men	6*
Women	3
<b>Race/ethnicity</b>	
White, Non-Hispanic	3
Black, Non-Hispanic	5
Hispanic (English- and Spanish-speaking)	10*
<b>Age</b>	
18-29	8*
30-49	4
50-64	2
65+	1
<b>Household income</b>	
Less than \$30,000/yr	3
\$30,000-\$49,999	6
\$50,000-\$74,999	6
\$75,000+	4
<b>Educational attainment</b>	
Less than High School	5
High School	3
Some College	4
College +	5

\* indicates a statistically significant difference.

**Source:** The Pew Research Center's Internet & American Life Project, August 9-September 13, 2010 Health Tracking Survey. N=3,001 adult internet users ages 18 and older, including 1,000 cell phone interviews. Interviews were conducted in English and Spanish. Margin of error is +/- 3%.

---

This report is based on the results of a telephone survey by the Pew Research Center's Internet & American Life Project conducted between August 9 and September 13, 2010. The survey was administered to a sample of 3,001 adults, age 18 and older, using a combination of landline and cellular

telephones. Interviews were conducted in English or Spanish. The sample margin of error is plus or minus 2.5 percentage points for the general population and plus or minus 2.9 percentage points for internet users (n=2,065).

Men are significantly more likely than women to use a location-based services (6% of online men versus 3% of online women), and Hispanics (English- and Spanish-speaking) are more likely than other ethnic groups to use these services (10% of online Hispanics do, compared to 3% of whites and 5% of blacks). There are no statistically significant differences by household income or educational attainment.

Location-based services such as Foursquare or Gowalla are significantly more popular with younger internet users; eight percent of online adults ages 18-29 use location-based services, significantly more than online adults in any other age group. Wireless internet users,<sup>2</sup> unsurprisingly, are also more likely to use location-based services, especially those who connect to the internet with their cell phone. Seven percent of all adults who go online with their mobile phone say they use a location-based service, as well as 5% of all wireless internet users.

---

### Location-based service users by internet connection type and frequency

*% of internet users who use a location-sharing service such as Foursquare or Gowalla*

<b>Total adults</b>	<b>4%</b>
<b>Wireless users</b>	
Use internet on cell phone	7
Total wireless users	5
Do not use wireless	2
<b>How often online</b>	
Daily	5
Several times per week	5
Less often	1
<b>Location</b>	
Urban	6
Suburban	4
Rural	2

**Source:** The Pew Research Center's Internet & American Life Project, August 9-September 13, 2010 Health Tracking Survey. N=3,001 adult internet users ages 18 and older, including 1,000 cell phone interviews. Interviews were conducted in English and Spanish. Margin of error is +/- 3%.

---

Though location-based services usually require an internet-connected mobile phone, 2% of non-wireless users (those who do not go online with either a cell phone or a wireless-enabled laptop) also say they

---

<sup>2</sup> Here, "wireless internet user" means adults who go online with a cell phone or wirelessly with their laptop.

have used such a service. This number may include cell phone users who use geosocial services such as Brightkite, which allows users to update their location by SMS. These non-wireless respondents may also include respondents who use location-reporting services such as Google Latitude or Dopplr, which can be used on a desktop computer. Respondents may also have signed up for the services to follow friends' movements without updating their own location.

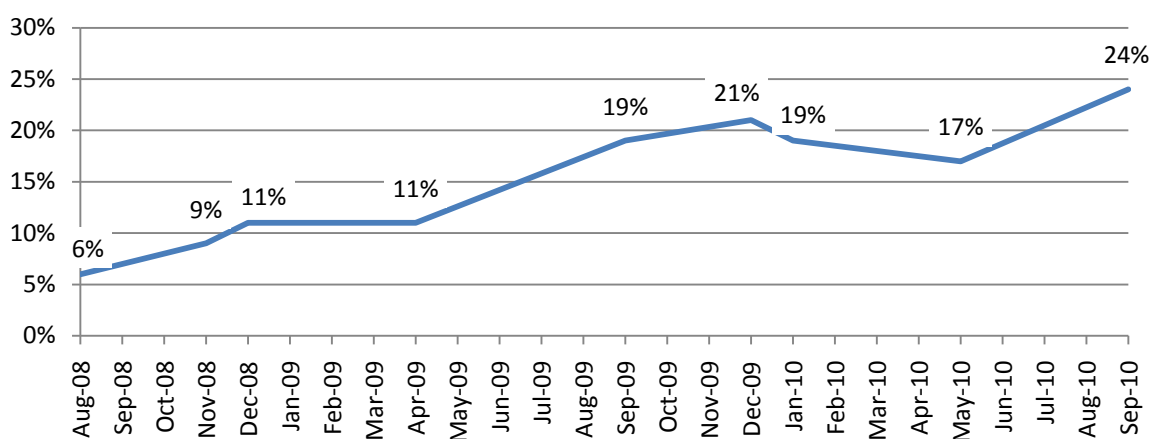
Additionally, the ability to report one's location is a feature that has recently been added to many pre-existing sites such as Twitter and Facebook. It is possible that as the lines between different types of services become increasingly blurred, it is difficult for respondents to always pinpoint exactly what sort of software they are using—especially on their mobile devices. Our recent report on the rise of apps culture, for instance, found that 11% of cell phone owners are not sure whether their phone is even equipped with apps.<sup>3</sup>

## Related internet activities

Location-based services are similar in some respects to status updating services such as Twitter, in which users communicate by short messages sent online or by text. Status updating services have grown in popularity over the past few years, from 6% of online adults saying they had used such a service in August 2008 to 24% in September 2010.

---

### The percentage of adult internet users who use Twitter or another status-updating service, 2008-2010



**Source:** Pew Internet Project surveys.

---

<sup>3</sup> "The Rise of Apps Culture" (2010), <http://pewinternet.org/Reports/2010/The-Rise-of-Apps-Culture.aspx>

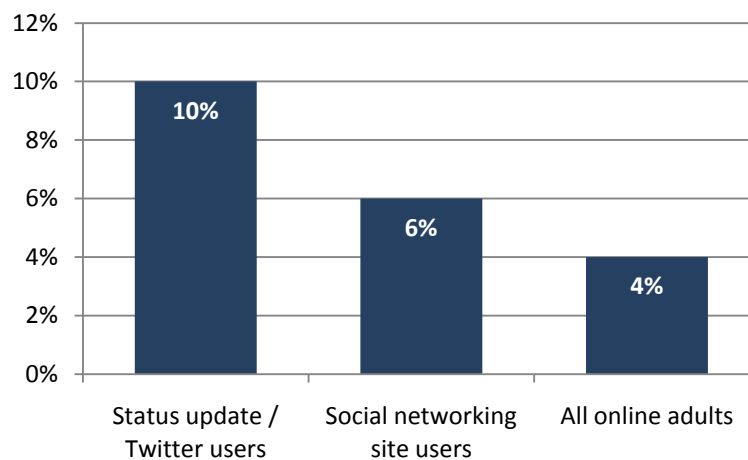
Internet users who use social networking sites such as Facebook or MySpace and those who use status-update services such as Twitter also have relatively high levels of location-based service usage:

- Among online adults, 62% use a social networking site such as Facebook, MySpace, or LinkedIn. Of these social networking site users, 6% use a location-based service.
- 24% of online adults use Twitter or another service to share updates about themselves or to see updates about others. Ten percent of these status update site users use a location-based service, over twice the rate of the general online population.

---

### Location-based service users by SNS and Twitter use

*% of internet users in each group who use a location-sharing service such as Foursquare or Gowalla*



**Source:** The Pew Research Center's Internet & American Life Project, August 9-September 13, 2010 Health Tracking Survey. N=3,001 adult internet users ages 18 and older, including 1,000 cell phone interviews. Interviews were conducted in English and Spanish. Margin of error is +/- 3%.

---

## Methodology

This report is based on the findings of a daily tracking survey on Americans' use of the Internet. The results in this report are based on data from telephone interviews conducted by Princeton Survey Research Associates International between August 9 and September 13, 2010, among a sample of 3,001 adults, age 18 and older. Interviews were conducted in English and Spanish. For results based on the total sample, one can say with 95% confidence that the error attributable to sampling is plus or minus 2.5 percentage points. For results based Internet users (n=2,065), the margin of sampling error is plus or minus 2.9 percentage points. In addition to sampling error, question wording and practical difficulties in conducting telephone surveys may introduce some error or bias into the findings of opinion polls.

A combination of landline and cellular random digit dial (RDD) samples was used to represent all adults in the continental United States who have access to either a landline or cellular telephone. Both samples were provided by Survey Sampling International, LLC (SSI) according to PSRAI specifications. The landline sample for this survey was designed to generalize to the U.S. adult population and to oversample African-Americans and Hispanics. To achieve these objectives in a cost effective manner, the design uses standard list-assisted random digit dialing (RDD) methodology, but telephone numbers are drawn disproportionately from telephone exchanges with higher than average density of African-American and/or Hispanic households. The cellular sample was not list-assisted, but was drawn through a systematic sampling from dedicated wireless 100-blocks and shared service 100-blocks with no directory-listed landline numbers.

New sample was released daily and was kept in the field for at least five days. The sample was released in replicates, which are representative subsamples of the larger population. This ensures that complete call procedures were followed for the entire sample. At least 7 attempts were made to complete an interview at a sampled telephone number. The calls were staggered over times of day and days of the week to maximize the chances of making contact with a potential respondent. Each number received at least one daytime call in an attempt to find someone available. For the landline sample, half of the time interviewers first asked to speak with the youngest adult male currently at home. If no male was at home at the time of the call, interviewers asked to speak with the youngest adult female. For the other half of the contacts interviewers first asked to speak with the youngest adult female currently at home. If no female was available, interviewers asked to speak with the youngest adult male at home. For the cellular sample, interviews were conducted with the person who answered the phone. Interviewers verified that the person was an adult and in a safe place before administering the survey. Cellular sample respondents were offered a post-paid cash incentive for their participation. All interviews completed on any given day were considered to be the final sample for that day.

Disproportionate sampling and non-response in telephone interviews can produce biases in survey-derived estimates. The dataset was weighted in two stages. The first stage of weighting corrected for the disproportionate landline sample design and also accounted for the overlapping landline and cellular sample frames as well as different probabilities of selection associated with the number of adults in the household. The second stage of weighting matched overall sample demographics to population parameters. The demographic weighting parameters are derived from a special analysis of the most

recently available Census Bureau's March 2009 Annual Social and Economic Supplement. This analysis produces population parameters for the demographic characteristics of adults age 18 or older. These parameters are then compared with the sample characteristics to construct sample weights. The weights are derived using an iterative technique that simultaneously balances the distribution of all weighting parameters.

Following is the full disposition of all sampled telephone numbers:

**Table 1: Sample Disposition**

Landline	Cell	
53,160	17,075	Total Numbers Dialed
2,613	441	Non-residential
2,430	32	Computer/Fax
21	---	Cell phone
27,936	6,428	Other not working
4,308	311	Additional projected not working
15,852	9,863	Working numbers
29.8%	57.8%	Working Rate
1,436	104	No Answer / Busy
2,734	2,370	Voice Mail
84	17	Other Non-Contact
11,598	7,372	Contacted numbers
73.2%	74.7%	Contact Rate
1,020	1,027	Callback
8,303	4,597	Refusal
2,275	1,748	Cooperating numbers
19.6%	23.7%	Cooperation Rate
158	60	Language Barrier
---	646	Child's cell phone
2,117	1,042	Eligible numbers
93.1%	59.6%	Eligibility Rate
116	42	Break-off
2,001	1,000	Completes
94.5%	96.0%	Completion Rate
13.6%	17.0%	Response Rate

The disposition reports all of the sampled telephone numbers ever dialed from the original telephone number samples. The response rate estimates the fraction of all eligible respondents in the sample that were ultimately interviewed. At PSRAI it is calculated by taking the product of three component rates:



- **Contact rate** – the proportion of working numbers where a request for interview was made
- **Cooperation rate** – the proportion of contacted numbers where a consent for interview was at least initially obtained, versus those refused
- **Completion rate** – the proportion of initially cooperating and eligible interviews that were completed

Thus the response rate for the landline sample was 13.6 percent. The response rate for the cellular sample was 17.0 percent.

---

## September Health Tracking Survey 2010

Final Topline

9/17/10

Data for August 9 – September 13, 2010

Princeton Survey Research Associates International  
for the Pew Research Center's Internet & American Life Project

Sample: n= 3,001 national adults, age 18 and older, including 1,000 cell phone interviews  
Interviewing dates: 08.09.10 – 09.13.10

Margin of error is plus or minus 3 percentage points for results based on Total [n=3,001]

Margin of error is plus or minus 3 percentage points for results based on internet users [n=2,065]

Margin of error is plus or minus 3 percentage points for results based on cell phone users [n=2,485]

Margin of error is plus or minus 3 percentage points for results based on online health seekers [n=1,655]

---

**Q6a** Do you use the internet, at least occasionally?

**Q6b** Do you send or receive email, at least occasionally?<sup>4</sup>

	USES INTERNET	DOES NOT USE INTERNET
Current	74	26
May 2010	79	21

**WEB1** Next... Please tell me if you ever use the internet to do any of the following things. Do you ever use the internet to...? / Did you happen to do this **yesterday**, or not?

Based on all internet users [N=2,065]

	TOTAL HAVE EVER DONE THIS	----- DID YESTERDAY	HAVE NOT DONE THIS	DON'T KNOW	REFUSED
Use a service such as Foursquare or Gowalla that allows you to share your location with friends and to find others who are near you					
Current	4	1	96	*	0
May 2010	5	2	95	*	0

---

<sup>4</sup> Prior to January 2005, question wording was "Do you ever go online to access the Internet or World Wide Web or to send and receive email?"